

Serial No. 10/735,475

Part 2 – Remarks

This Amendment and Response is responsive to the Office Action mailed May 16, 2007. In that Office Action, all of the pending claims were rejected as obvious in view of combinations of references. Specifically, (a) claims 1, 3, 4, 8, 9, and 16, were rejected under 35 USC 103(a) as obvious from US patent 6,175,610 to Peter in combination with US patent 6,652,514 to Ellman and US patent 6,710,770 to Tomasi; (b) claims 5, 6, 7, 17-20 and 22-24 were rejected under 35 USC 103(a) as obvious from the combination of Peter, Ellman and Tomasi in further combination with US patent 4,867,551 to Perera; (c) claim 10 was rejected under 35 USC 103(a) as obvious from the combination of Peter, Ellman and Tomasi in further combination with US patent 4,148,019 to Durkee; (d) claims 11-15 were rejected under 35 USC 103(a) as obvious from the combination of Peter, Ellman, Tomasi and Perera in further combination with a publication by Laseske; (e) claims 25-28 were noted as "having been examined" but "rejected for the same reason indicated above listed in the rejections to claims 1, 3-20 and 22-24"; (f) claims 32-33 were noted as examined but were apparently not specifically rejected: "The Examiner further cites a reference Satwinder D. S. Mahli (US Patent No. 6,040,811) can be used to combine with Peter, Ellman, Tomasi and Perera, teaches . . . for the purpose of providing the user with privacy providing an additional advantage." (sic); and (g) claims 34, 36-39, 42-65 and 69-72 were noted as having "been examined, yet, having been rejected for the same reason listed in the rejections to claims 1, 3-8, 10-20, 22-28, 32 and 33 indicated above."

Reconsideration of these rejections is respectfully requested, in view of these remarks.

Claims 1, 3-8, 10-20, 22-28, 32-34, 36-39, 42-65 and 69-72 are now pending.

**The Rejections Do Not Comply with the Law or PTO Policy, and
Thereby Deprive the Applicant of a Fair Opportunity to Respond.**

All rejections are based on obviousness (35 USC 103(a)). All of the obviousness rejections are based on the combination of at least three references, and at least one and maybe two of the rejections appear to be based on the combination of five references, and possibly some of the rejections are based on a combination of six or

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seven references. Only four of the seven rejections contain definite statements identifying the references applied in those rejections.

In each of the rejections, the references are described as "teaching" certain alleged subject matter. However, in none of the rejections is any reason given why a person of ordinary skill in the art would have combined the references in the manner claimed. The failure to provide such reasons is in conflict with the law and PTO policy.

The PTO policy represented in MPEP 706.02(j) is as follows, in relevant part:

35 U.S.C. 103 authorizes a rejection where, to meet the claim, it is necessary to modify a single reference or to combine it with one or more other references. After indicating that the rejection is under 35 U.S.C. 103, the Examiner should set forth in the office action:

... (D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.

... It is important for an Examiner to properly communicate the basis for rejection so that the issues can be identified early and the applicant can be given a fair opportunity to reply.

Moreover, the recent Supreme Court case KSR Int'l. Co. v. Teleflex, Inc., 127 S.Ct. 1727 (2007), reaffirmed the necessity to make explicit the apparent reason to combine the prior art elements in an obviousness evaluation. The PTO has recognized this aspect of the KSR case in a Memorandum dated May 3, 2007, addressed to all of the Technology Center Directors. In that Memorandum, copy attached, the Deputy Commissioner for Patent Operations, Margaret A. Focarino, stated:

Therefore, in formulating a rejection under 35 USC § 103(a) based upon a combination of prior art elements, it is necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.

An examination of the seven obviousness rejections indicates that no reasons have been advanced in any of those rejections as to why a person having ordinary skill in the art would have combined the references in the manner claimed. Consequently, the applicant has been deprived of a fair opportunity to respond to these obviousness rejections.

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The rejections in the May 16 office action are not the first occurrence of a failure to state reasons for combining the references. The obviousness rejections of the first office action of August 22, 2006, were also deficient in the same regard. In responding to the August 22, 2006 office action, the applicant pointed out this deficiency and requested clarification and a complete office action. See page 21 of the Amendment and Response to First Office Action, filed February 16, 2007. The May 16 office action did not rectify that deficiency, but in fact exacerbated the deficiency because all of the rejections are now based on obviousness. Previous rejections based on anticipation have been withdrawn.

Any future obviousness rejections should comply with the law and PTO policy by stating reasons for the combination of elements, and any such future obviousness rejections should not be made final, because the applicant has not had a previous opportunity to respond to a complete obviousness rejection.

Moreover, the applicant requests clarification of the statements or rejections summarized at (e), (f) and (g) on page 17 hereof (paragraphs 6, 8 and 9, respectively, of the May 16 office action). The rejections (e) and (g) refer back to preceding rejections without specifically designating the claims or the preceding rejections which are applicable to the claims. As many as four different rejections could therefore be applicable to each of these claims, but the applicant has no notice or understanding of which rejections are intended to apply to which claims. The statement (f) (paragraph 8 of the May 16 office action), if it is a rejection, should be clarified as a rejection or withdrawn if it is not a rejection.

Previous Requests for Clarification Have Been Off-Handedly Dismissed.

As noted above, the applicant's Amendment and Response of February 16, 2007 requested a statement of reasons in any future obviousness rejection why a person having ordinary skill would have combined the references. The next office action of May 16, 2007 contained no such statement of reasons.

On June 18, 2007, the undersigned had a telephone conversation with Anthony Knight, the supervisory patent examiner. During that telephone conversation, Mr. Knight did not disagree with the undersigned's position that the obviousness rejections

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were deficient, and he may have acknowledged that the obviousness rejections did not comply with MPEP 706.02(j), but he did not explicitly so state. Instead, Mr. Knight stated that the PTO policy about obviousness rejections was in a state of flux in view of the KSR case. He suggested that the undersigned wait a few weeks before responding because he anticipated that the PTO would issue new examination guidelines in view of the KSR case.

On August 10, 2007, the undersigned again contacted Mr. Knight by telephone, because the information on the PTO website about the new PTO examination guidelines indicated they were still not available to the public. During that conversation, Mr. Knight clearly did not acknowledge any deficiency with respect to the obviousness rejections, and had no suggestion concerning a reply to the lack of stated reasons in the obviousness rejections for combining the references.

The applicant has taken reasonable steps to attempt to achieve clarification and/or rectification of the obviousness rejections, with a view toward advancing the examination of this application, but without success.

Accordingly, and without waiving the requirement or request for a complete obviousness rejection which asserts reasons why an ordinarily skilled person would combine the references, the applicant can only respond to the differences and proposed modifications of the substantive teachings of the cited references relative to the pending claims.

The Combinations of References Do Not Reach the Scope of the Claims and Were Assembled from Hindsight.

The pending claims recite, in the manner set forth, an electrosurgical generator having a virtual control panel for controlling the functionality of the electrosurgical generator (claim 1), or a virtual control panel for an electrosurgical generator to control its functionality (claim 34), or a method of controlling an electrosurgical generator with a control panel image (claim 42). The control results from optical contact interrogation of a finger or other object with a control panel image.

The US patent to Peter is the primary reference for all of the obviousness rejections. Peter does not describe an electrosurgical generator. Peter describes x-ray

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CT apparatus (column 3, lines 3 and 33) which is housed within a singular room dedicated to that equipment. Peter also mentions medical systems in general, but describes such systems in the context of a room with projectors extending from the ceiling, displays located about the room, and cameras located on the ceiling.

An x-ray CT apparatus or a general medical system that consumes an entire room is not an electrosurgical generator. An electrosurgical generator is a specific type of medical device, described generally in the application from page 1, line 18 to page 2, line 2. Electrosurgical generators are well known in the art as a specific type of medical device which applies a selectable waveform of high-frequency, high-voltage electrical current to tissue during a surgical procedure, to cut the tissue, to stop or coagulate blood flow from the cut tissue, or to simultaneously cut and coagulate, depending upon the waveform selected and the amount of power selected by the surgeon.

All of the independent claims recite, in the manner set forth, optical interrogation of contact of an object with a control panel image. That optically interrogated contact interaction with the control panel image is the basis for the interaction signal supplied to control the functionality of the electrosurgical generator. Contact interrogation is described in the specification at page 9, lines 4-9, page 11, lines 18-21, page 14, lines 8-12, and even more specifically at page 14, lines 21-26.

Peter does not interrogate contact interaction with the control panel image. Peter interrogates the position or movement of the surgeon's hand or finger above the image. So long as the hand or finger is at a specific position above the image, and remains there for a specific amount of time, Peter recognizes this as valid input for controlling the x-ray equipment. There are finger troughs or recesses and projections or raised areas on the surface upon which Peter projects the image, but these raised areas and recesses are for the practitioner's convenience in registering or aligning his/her finger with the appropriate control area of the image so its presence above the appropriate location will be correctly recognized. See column 6, lines 9-13. However, Peter does not interrogate contact with the surface upon which the image is located; Peter interrogates only the presence of a finger above the image. Peter has no capability of detecting or interrogating contact of the object with the image.

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The inability of Peter to interrogate contact with the control panel image is explained in Peter at column 4, lines 1-15. Peter analogizes the situation to positioning the cursor with a mouse of a computer, and then clicking the mouse by leaving the cursor at the position for a predetermined time. In other words, Peter's activity is entirely two-dimensional, in the nature of casting a shadow, and is not three-dimensional as is involved in interrogating contact with the control panel image surface as is recited more specifically in the pending claims.

The May 16 office action, at paragraph 10, responds to contact interrogation as a distinguishing feature as follows: "Applicants' arguments regarding 'contact' interrogation with the image on the display surface which is disagreed with. Peter teaches 'located on' is also 'optically contact' exact the same like the claimed invention." (sic). This response ignores the claim language which requires interrogation of contact. Peter simply lacks any capability to interrogate contact. It might be that contact causes the finger or object to be located above the image and thereby cast a shadow at the appropriate location, but Peter only has the capability of interrogating the location or shadow of the finger or object above the image. Peter does not have the claimed capability of interrogating or determining contact with the image.

The optical triangulation technique for achieving the contact interrogation, described in the application at page 12, line 3 to page 14, line 23, and in Fig. 3, offers considerable advantages in reliability over the two-dimensional recognition functionality described in Peter.

Contact interrogation with the control panel image provides a highly reliable and definite request for a control action. The holographic control system described in the application at page 4, line 3, and the shadow recognition system described in Peter, are subject to unintended operation if a person accidentally moves his/her hand, or some other object, through the holographic image or above the control panel image. Contact interrogation provides the reliability of a specific physically-defined control input, i.e. contact, having essentially the same reliability as that which results from pushing a button or moving a switch. Reliability of control input action is essential when applying

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high-voltage, high-frequency electrical current to the tissue of a living patient during a surgical procedure, because otherwise, significant damage to the tissue and danger to the patient could result.

The significant advantages and improvements available from the claimed invention are described in the application at page 9, lines 12-19; page 11, line 22 to page 12, line 5; page 15, lines 13-24; page 17, lines 21-30; page 20, line 23 to page 21, line 27; and page 14, lines 1-28; among others – all taken in relation to the background described at page 1, line 18 to page 5, line 5.

The second reference commonly applied in all of the obviousness rejections is Ellman. Ellman describes an electrosurgical generator which automatically selects a set of operating parameters (amount of electrical power and type and characteristics of the waveform for cutting, coagulating or simultaneous cutting and coagulating) in response to the manual connection of a handpiece to the electrosurgical generator. The handpiece is a medical instrument which includes electrodes to deliver the high-voltage, high-frequency current to the tissue, as Ellman shows in Fig. 1. A finger-switched handpiece 26/36 is connected to the generator 10 at a socket 20, and a bipolar handpiece 28 is connected to the generator at a socket 22. Each handpiece has incorporated with its connection end, a means for generating a unique control signal which is recognized by a computer in the electrosurgical generator to automatically establish the set of operating conditions specific to the handpiece, once that handpiece is manually connected to the electrosurgical generator. See Ellman, column 3, lines 6-11; column 2, lines 36-38 and lines 40-44; and column 18, lines 7-10.

Ellman has absolutely nothing whatsoever to do with virtually controlling an electrosurgical generator. Ellman requires manual insertion of a connector plug in a socket, and interrogating unique signals associated with the connector plug once it is inserted. This type of functionality is not even remotely connected with optical contact interrogation with an image of a control panel for the purpose of controlling the electrosurgical generator. Ellman's contribution is automatic interrogation of the handpiece and automatically setting the output characteristics of the generator in response to connecting the handpiece to the electrosurgical generator. This

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contribution is not relevant to the present invention, and contributes nothing beyond Peter in relation to the claimed subject matter.

The Tornasi reference is the third common reference applied in all of the obviousness rejections. Tomasi describes a virtual keyboard for a computer. Nothing in the Tomasi describes or suggests any applicability to electrosurgical generators. Nothing in Tomasi relates to the issues associated with allowing a surgeon to directly control the electrosurgical generator rather than rely on an assistant to control the generator in response to voice commands, due to the fact that the electrosurgical generator and its typical control panel cannot be brought into the sterile field of the surgical site, as described in the Background of the application. Nothing in Tomasi suggests replacing a conventional electrosurgical generator control panel with a virtual control panel. Nothing in Tomasi suggests displaying the control panel image on a portion of the generator housing. Nothing in Tomasi suggests separating the display surface structure from the housing, or making it attachable or detachable. No wireless link appears to be described in Tomasi, since the virtual keyboard remains a part of Tomasi's computer. Tomasi is not concerned with sterilizable or disposable structures. Tomasi does not appear to display functional information simultaneously with control information. Tomasi does not disclose or suggest multiple virtual control panels, any one of which is capable of control functionality of a single device such as an electrosurgical generator.

In short, the applicant's own disclosure is the only connection between Peter and Tomasi. Use of hindsight gained from the applicant's own disclosure is an inappropriate basis for combining references in an obviousness rejection.

Perera has also been applied in some of the rejections. Perera describes a display projection optical system for spectacles or sunglasses. Perera mentions heads up and hands-free displays of information in specialized applications such as an electronic timer built into binoculars for sports events and for athletes while competing, and helmets for fighter aircraft pilots displaying visual information superimposed on the field of view.

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Perera has nothing whatsoever to do with optical contact interrogation with a projected control panel image for the purpose of controlling anything, including an electrosurgical generator. The lack of relevant information contained in Perera is similar to the total lack of connection to electrosurgical generators as has been explained above in connection with Tomasi. Consequently, it seems that the applicant's own disclosure is the only nexus between Perera and the claimed subject matter. Hindsight is an inappropriate basis for combining references.

Durkee has also been applied in some of the rejections. Durkee discloses a security alarm transmission system which includes a plurality of alarm transmitter units. Each alarm transmitter unit is controlled by condition sensors which include inductive pickup loops extending around the periphery of the building. Different types of alarms are distinguished. Electromagnetic signals are transmitted wirelessly between the alarm transmitter units and a receiver. See Durkee's abstract.

Durkee has nothing to do with optical contact interrogation with a projected control panel image for the purpose of controlling an electrosurgical generator, or anything else. The lack of relevant information contained in Durkee is similar to the total lack of connection to electrosurgical generators as has been explained above in connection with Tomasi. Consequently, it seems that the applicant's own disclosure is the only nexus between Durkee and the claimed subject matter. Hindsight is an inappropriate basis for combining references.

The Laeseke publication has been applied in some of the rejections. Laeseke relates to testing a biopsy needle which has been modified to deliver radio frequency current to coagulate blood flow from a liver or kidney after a biopsy has been taken by that needle. The modifications to the equipment were intended to be minimal. See Laeseke, column 1, page 494. It appears that the coating used had to be biocompatible, sterilizable, disposable and relatively inexpensive.

Laeseke appears to use a conventional electrosurgical generator in his biopsy needle testing technique. However, that electrosurgical generator is conventional and does not employ optical contact interrogation with a projected control panel image for the purpose of controlling it. The lack of relevant information contained in Laeseke is

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similar to the total lack of connection to electrosurgical generators as has been explained above in connection with Tomasi. Consequently, it seems that the applicant's own disclosure is the only nexus between Laeseke and the claimed subject matter. Hindsight is an inappropriate basis for combining references.

Lastly, the Malhi patent may have been cited in one or more of the rejections. Malhi describes a display for a portable computer. The disclosure in Malhi appears to be confined to mechanical and electrical characteristics of the display. Nothing in Malhi relates to optical contact interrogation with a control panel image. Nothing in Malhi relates to electrosurgical generators, or the use of a display in an electrosurgical generators. The lack of relevant information contained in Malhi is similar to the total lack of connection to electrosurgical generators as has been explained above in connection with Tomasi. Consequently, it seems that the applicant's own disclosure is the only nexus between Malhi and the claimed subject matter. Hindsight is an inappropriate basis for combining references.

Other Application

The present Examiners are reminded of the their examination of a companion application by the same inventors, Serial No. 10/735, 573, filed concurrently with the present application. The examination of the companion application might be considered with respect to this application.

Conclusion

It is believed that the pending claims define nonobvious, patentable subject matter, and that the pending claims are not obvious over the cited combinations of references. All of the pending claims are believed to be in condition for allowance. Allowance is respectfully requested.

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The Examiner is requested to contact the undersigned by telephone to discuss any issues which may inhibit the immediate allowance of the claims.

Respectfully submitted,

Date: August 15, 2007

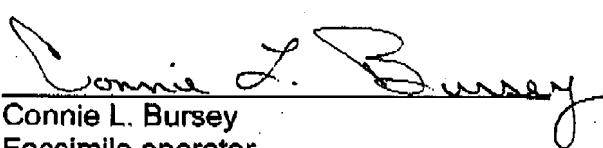
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Certificate of Filing by Facsimile Transmission

The undersigned hereby certifies that the foregoing **Response to Second Office Action**, including the attached transmittal letter showing that no additional fees are required and the May 3, 2007 Memorandum from Margaret A. Focarino, are being transmitted by facsimile to the United States Patent and Trademark Office, at the Central PTO facsimile number 571 273 8300, this 15th day of August, 2007.


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MEMORANDUM

DATE: May 3, 2007

TO: Technology Center Directors
Margaret G. Focarino
 FROM: Margaret A. Focarino
 Deputy Commissioner
 for Patent Operations

SUBJECT: Supreme Court decision on *KSR Int'l. Co., v. Teleflex, Inc.*

The Supreme Court has issued its opinion in *KSR*, regarding the issue of obviousness under 35 U.S.C. § 103(a) when the claim recites a combination of elements of the prior art. *KSR Int'l Co. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). A copy of the decision is available at <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>. The Office is studying the opinion and will issue guidance to the patent examining corps in view of the *KSR* decision in the near future. Until the guidance is issued, the following points should be noted:

(1) The Court reaffirmed the *Graham* factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under *Graham* are:

- (a) determining the scope and contents of the prior art;
- (b) ascertaining the differences between the prior art and the claims in issue;
- (c) resolving the level of ordinary skill in the pertinent art; and
- (d) evaluating evidence of secondary consideration.

Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

(2) The Court did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

(3) The Court rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

(4) The Court noted that the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it was "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. The Court specifically stated:

Often, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

KSR, slip op. at 14 (emphasis added).

Therefore, in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.